

REMARKS

Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claims 1 and 8 are amended. Claims 10-21 have been withdrawn from consideration as being directed to a non-elected invention. After entry of the Amendment, claims 1-21 will remain pending in the patent application.

The Examiner indicated that a copy of JP2001019460 and JP62108744 were not provided with the Applicants' Information Disclosure Statement (IDS) dated March 12, 2003. In response, Applicants submit that the references were properly filed at that time. A copy of the IDS and the stamped receipt along with a copy of these two references, are attached to the present Amendment.

Applicants appreciate the indication that claim 8 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, Applicants have rewritten claim 8 in independent form in accordance with the suggestion of the Examiner. Accordingly, it is respectfully submitted that claim 8 is in condition for allowance.

Claims 1-2, 4, and 9 were rejected under 35 U.S.C. §102(b) based on Berkey (U.S. Pat. No. 4,629,485) (Berkey '485). It is respectfully submitted that the amendment to claim 1 obviates the rejection.

Claim 1, as amended, is patentable over Berkey '485 at least because it recites a method of manufacturing a glass base material comprising, *inter alia*, accumulating glass particles on a starting rod to form a porous glass soot free from germanium, and sintering the porous glass soot in an atmosphere of mixed gas containing fluorine-compound gas to form a GI type refractive index profile, a density of fluorine contained in said porous glass soot gradually increasing with a distance from a center of the core. It is respectfully submitted that the amendment to claim 1 does not represent new matter and that support for these changes may be found, for example, on page 11, lines 17-18, and page 12, lines 23-27. Applicants respectfully submit that Berkey '485 does not teach or suggest a method for manufacturing a glass base material including at least this feature. Therefore, Berkey '485 does not teach or suggest each and every feature recited by claim 1 and, as a result, cannot anticipate this claim.

In contrast to the method recited by claim 1, Berkey '485 teaches a method of manufacturing a graded index fiber wherein the core portion of the fiber is doped with germanium. (See col. 8, line 25). In particular, Berkey '485 discloses that a layer of GeO₂

doped SiO₂ is deposited on the mandrel during a first pass of the burner. (See col. 8, lines 28-30). Berkey '485 also discloses that "after each pass of the burner, the flow rate of GeCl₄ is reduced so that the final burner pass deposits pure SiO₂." (See col. 8, lines 30-32). The resultant core portion of the fiber has a germanium content illustrated by that portion of curve 76 of FIG. 8. In Berkey '485, the presence of germanium is clearly used to increase the refractive index. (See col. 8, lines 25-26).

Claims 2, 4 and 9 are patentable over Berkey '485 by virtue of their dependency from claim 1 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-2, 4, and 9 under 35 U.S.C. §102(b) based on Berkey (U.S. Pat. No. 4,629,485) are respectfully requested.

Claims 1 and 9 were rejected under 35 U.S.C. §102(b) based on Berkey (U.S. Pat. No. 5,916,109) (Berkey '109). Applicants respectfully submit that the amendment to claim 1 obviates the rejection.

Claim 1, as amended, is patentable over Berkey '109 at least because it recites a method of manufacturing a glass base material comprising, *inter alia*, accumulating glass particles on a starting rod to form a porous glass soot free from germanium, and sintering the porous glass soot in an atmosphere of mixed gas containing fluorine-compound gas to form a GI type refractive index profile, a density of fluorine contained in said porous glass soot gradually increasing with a distance from a center of the core. Berkey '109 does not teach or suggest a method for manufacturing a glass base material including at least this feature. Therefore, Berkey '109 does not teach or suggest each and every feature recited by claim 1 and, as a result, cannot anticipate this claim.

In contrast to the method recited by claim 1, Berkey '109 teaches a method of manufacturing a graded index fiber wherein the core portion of the fiber is doped with germanium. (See col. 8, lines 46-60). In particular, Berkey '109 clearly teaches that it is preferable to form the core 22 with a dopant like germanium. (See col. 6, lines 17-21).

Claim 9 is patentable over Berkey '109 by virtue of its dependency from claim 1 and for the additional feature recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1 and 9 under 35 U.S.C. §102(b) based on Berkey (U.S. Pat. No. 5,916,109) are respectfully requested.

Claims 3 and 7 were rejected under 35 U.S.C. §103(a) based on Berkey (U.S. Pat. No. 4,629,485). Applicants respectfully submit that the amendment to claim 1 obviates the rejection.

Claims 3 and 7 depend from claim 1 and are patentable over Berkey '485 for at least the same reasons given above related to claim 1.

Accordingly, reconsideration and withdrawal of the rejection of claims 3 and 7 under 35 U.S.C. §103(a) based on Berkey (U.S. Pat. No. 4,629,485) are respectfully requested.

Claims 1-5, 7 and 9 were rejected under 35 U.S.C. §103(a) based on Berkey (U.S. Pat. No. 4,629,485) in view of Kanamori et al. (U.S. Pat. No. 5,055,121) (Kanamori). The rejection is respectfully traversed.

The Examiner concedes in the Office Action that Berkey '485 does not disclose monitoring the density. The Examiner then alleges that the combination of Berkey '485 and Kanamori would have been obvious because "Kanamori discloses that the upper limit for easy addition of fluorine is no higher than 0.5 g/cc." However, Applicants respectfully submit that in order to establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. See MPEP 2143. In particular, applicants note that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)" *Id.* (Emphasis added). Clearly, the Examiner fails to identify where such a desirability is present in these references.

Furthermore, Applicants note that claims 1-5, 7 and 9 are also patentable over Berkey '485 for the same reasons set forth in the foregoing discussion. Namely, claims 1-5, 7 and 9 are also patentable over Berkey '485 at least because these claims recite a method of manufacturing a glass base material comprising, *inter alia*, accumulating glass particles on a starting rod to form a porous glass soot free from germanium.

It is respectfully submitted that Kanamori cannot be combined with Berkey '485 to overcome this deficiency. In particular, Applicants respectfully note that under MPEP 2143.01, it is improper to propose a modification that would render the prior art unsatisfactory for its intended purpose. In this case, one of the intended purposes of Berkey '485 is to increase the refractive index of the core portion of the fiber. (See, for example, claim 10, and col. 8, lines 22-26 and FIG. 8). This is achieved by including germanium

within the core portion. Berkey '485 clearly discloses that the use of germanium in the core portion of the fiber is desirable to increase the refractive index of the core portion. (See col. 8, lines 22-26 and FIG. 8). Reference is also made to col. 8, lines 27-59 where Berkey '485 describes the different process steps to include germanium within the core portion of the fiber. Clearly, the expressed purpose of increasing the refractive index within the central portion of the fiber would be contradicted if no germanium was present. Because the proposed modification alters the principle of operation of the Berkey '485 reference, Applicants respectfully submit that Kanamori cannot be combined with Berkey '485 to overcome this deficiency.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-5, 7 and 9 under 35 U.S.C. §103(a) based on Berkey (U.S. Pat. No. 4,629,485) in view of Kanamori are respectfully requested.

Claims 2 and 6 were rejected under 35 U.S.C. §103(a) based on Berkey (U.S. Pat. No. 5,917,109) (Berkey '109). Applicants respectfully submit that the amendment to claim 1 obviates the rejection.

Claims 2 and 6 depend from claim 1 and are patentable over Berkey '109 for at least the same reasons provided above related to claim 1.

Accordingly, reconsideration and withdrawal of the rejection of claims 2 and 6 under 35 U.S.C. §103(a) based on Berkey (U.S. Pat. No. 5,917,109) are respectfully requested.

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

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